

Notice of Allowability

Application No.

10/751,120

Examiner

Leon Flores

Applicant(s)

FRANK ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/28/2007.
2. ☒ The allowed claim(s) is/are 1-34.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 5/1/2007
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DAVID C. PAYNE

SUPERVISORY PATENT EXAMINER

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-34 are allowed.
2. The following is an examiner's statement of reasons for allowance: The art of record does not suggest the respective claim combinations together and nor would the respective claim combinations be obvious with:

Re claim 1, the further limitation of *"a method for frequency correction in a multicarrier system, comprising: receiving a signal comprising a stream of data signals, wherein at least one of the data signals comprises at least two data signal samples, calculating an estimated phase offset for each data signal as a function thereof, calculating a predicted phase offset for each data signal as a function of the estimated phase offset thereof and the estimated phase offset of a preceding one of the data signals such that the ratio of the calculated predicted phase offset of each data signal and the estimated phase offset of a first data signal of said stream substantially equals the ratio of a distance (X_{k+1}) between a beginning of a following one of the data signals and a main phase reference point and a distance (Y_1) between a phase reference point of the first data signal and the main reference point said distances (X_{k+1}, Y_1) being indicative of a number of data signal samples in the time domain, and correcting the received signal using the predicted phase offset"*. Claims 2-12, 22, and 34 depend on claim 1 above.

Re claim 13, the further limitation of *"an apparatus for frequency correction in a multicarrier system, comprising: a receiver configured to receive a signal comprising a*

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stream of data signals, at least one of the data signals comprising at least two data signal samples, a frequency corrector configured to perform frequency correction of each data signal in response to a corresponding predicted phase offset, and a phase locked loop means (6,... 24) configured to generate the predicted phase offsets, comprising a phase discriminator (12, 14, 16) configured to generate an estimated phase offset for each data signal as a function thereof, a filter (18, 20, 22) configured to receive estimates phase offsets and to generate the predicted phase offset for each data signal as a function of the estimated phase offset thereof and the estimated phase offset of a preceding one of the data signals, wherein the filter is adapted to generate the predicted phase offset of each data signal such that a ratio of the generated predicted phase offset of each data signal and the estimated phase offset of the first data signal of said stream substantially equals a ratio of a distance (X_{k+1}) between a beginning of a following one of the data signals and a main phase reference point and a distance (Y_1) between a phase reference point of the first data signal and the main reference point said distances (X_{k+1}, Y_1) being indicative of a number of data signal samples in the time domain". Claims 14-21 and 23-33 depend on claim 13 above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon Flores whose telephone number is 571-270-1201. The examiner can normally be reached on Mon-Fri 7-5pm Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LF
August 29, 2007


DAVID C. PAYNE
SUPERVISORY PATENT EXAMINER